Delta Methylmercury TMDL & Basin Plan Amendment Information Sheet

California Regional Water Quality Control Board, Central Valley Region
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Mercury Impairment, TMDL Development and Basin Planning

The Central Valley Water Board identified the Delta as impaired by mercury because Delta fish have elevated levels of methylmercury that pose a risk for human and wildlife consumers. The Central Valley Water Board's development of a water quality attainment strategy to resolve the mercury impairment in the Delta has two components: the methylmercury total maximum daily load (TMDL) for the Delta and the amendment of the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (the Basin Plan) to implement the TMDL program. The proposed Basin Plan amendment and TMDL draft staff reports will be made available for public review and presented – with public comments and staff responses to public comments – to the Central Valley Water Board members for their consideration and adoption. Reports and other notices can be obtained at:

www.waterboards.ca.gov/centralvalley/water_issues/tmdl/central_valley_projects/delta_hg

The TMDL development and Basin Planning process involves the:

- Technical analysis of the extent of impairments and methyl and total mercury sources;
- Identification of a range of possible water quality objectives that correspond to safe fish methylmercury levels protective of humans and wildlife that consume Delta fish;
- Identification of a range of possible implementation program options and corresponding source reduction strategies needed to attain safe fish tissue methylmercury levels;
- Environmental analysis of the potential impacts of reasonably foreseeable methods of compliance with the recommended implementation program to comply with the California Environmental Quality Act.

A draft TMDL report was first released for public review in August 2005. A revised draft TMDL report and draft Basin Plan amendment staff report were released in June 2006 for scientific peer review. Staff revised substantial portions of the proposed Basin Plan amendment language and staff reports based on comments and data provided by the scientific peer reviewers, State and Federal agency staff, and numerous stakeholders throughout the TMDL development and Basin Planning process. Updated versions, February 2008, of the proposed Basin Plan amendment language, draft Basin Plan amendment staff report, and draft TMDL report are available on the website noted above.

Proposed Water Quality Objectives

Staff recommends three water quality objectives for mercury (wet weight) in Delta fish:

- 0.24 mg/kg in large (150-500 mm) trophic level (TL) 4 fish such as bass and catfish;
- 0.08 mg/kg in large TL3 fish such as carp and salmon; and
- 0.03 mg/kg in TL2/3 fish less than 50 mm in length, such as inland silverside, mosquitofish and threadfin shad.

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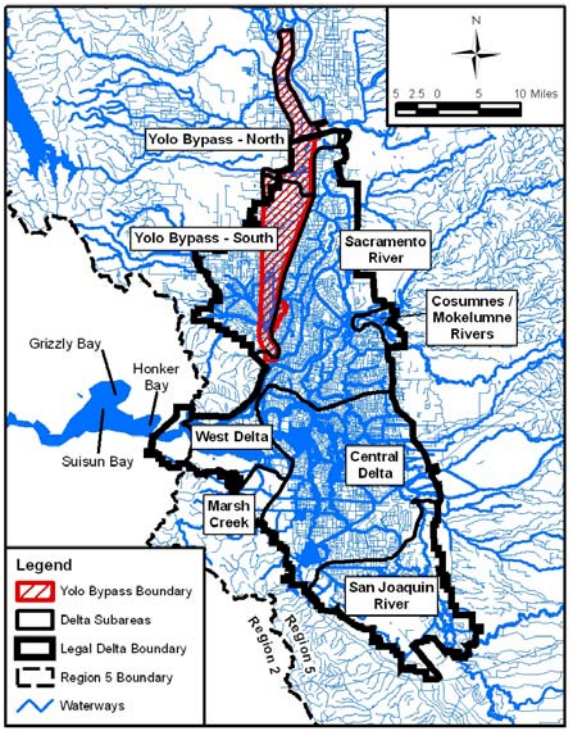
The objectives for large TL3 and 4 fish are protective of (a) humans eating 32 g/day (one 8-ounce meal per week) of commonly consumed, large fish; and (b) wildlife species (e.g., bald eagle, osprey, and river otter) that consume large fish. The objective for small TL2/3 fish is protective of wildlife species that consume small fish (e.g., California least tern and western snowy plover).

Proposed Implementation Program

The proposed implementation program focuses on reducing sources of both methylmercury and inorganic mercury. The proposed implementation program focuses on methylmercury because studies conducted in California and elsewhere in the United States indicate that reducing methylmercury levels in ambient water should result in the reduction of fish methylmercury levels. The program also addresses inorganic mercury because: methylmercury production is a function of the inorganic mercury content of sediment; the implementation program for the Delta must maintain compliance with the USEPA's CTR criterion for total recoverable mercury; and the mercury control program for San Francisco Bay assigned a total mercury load reduction to the Central Valley. Methylmercury sources include tributary inputs from upstream watersheds and within-Delta sources such as methylmercury flux from sediments in wetlands and open-water habitats, municipal and industrial wastewater, agricultural drainage, and urban runoff. Sources of inorganic mercury occur primarily in the Delta's tributary watersheds and include gold and mercury mine sites, legacy mercury in the stream channel sediments, geothermal springs, atmospheric deposition, urban runoff, and municipal and industrial wastewater.



Legal Delta Boundary, Yolo Bypass & Hydrology-Based Delineation of Subareas

For the first phase of the implementation program, staff recommends that parties responsible for methylmercury sources in the Delta and its source region downstream of major dams be required to conduct individual or collaborative methylmercury source characterization and control studies. In addition, staff recommends that inorganic mercury load reduction efforts focus on the tributary watersheds that export large volumes of highly contaminated sediment (e.g., Cache Creek Settling Basin, Putah Creek, and Feather and American Rivers) and point sources expected to increase as a result of predicted population growth. Additional actions may be identified during the first phase of the program and implemented through future Basin Plan amendments. Dischargers would be required to meet their methylmercury load allocations during the second phase of the implementation program.

The Central Valley Water Board will evaluate several implementation alternatives to determine the scope of the Delta mercury control program during a hearing in 2008. Ultimately, the implementation program must result in fish tissue methylmercury levels throughout the Delta that are protective of humans and wildlife.

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